



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,098	07/22/2003	Hiroki Akano	FUJA 20.519 (100794-00459)	8771
26304	7590	04/29/2008	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			UTAMA, ROBERT J	
		ART UNIT	PAPER NUMBER	
		3714		
		MAIL DATE	DELIVERY MODE	
		04/29/2008	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/625,098	AKANO, HIROKI	
	<b>Examiner</b>	<b>Art Unit</b>	
	ROBERT J. UTAMA	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 13 March 2008.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-4, 10-13 and 35-42 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-4, 10-13, 35-42 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

**DETAILED ACTION**

***Status of the application***

1. This office action is a response to the amendment and arguments filed on 02/13/2008.

The current statuses of the claims in the application are as follows: claims 1-4, 10-13, 35-42 and claims 5-9 and 14-34 have been cancelled.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claim 1-4 and 10-13 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The independent claims 1, 10 and 11 all carry the limitation of having geographical features information. The examiner fails to find support for this feature in the specification as originally filed. Claim 2-4 are rejected due to its dependencies to a rejected claim.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 1-3 and 10-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Varshneya et al US 6,386,879 in view of Draper US 6,254,394**

**Claim 1:** The Varshneya reference provides a teaching of a laser transmitting/receiving system for target practice including laser transmitter and laser receiver, wherein: said laser transmitter has a modulator for modulating a transmitting laser signal by position information of said laser transmitter (see 4:43-47 (Trigger Pulled Time and GPS (x,y,z) data); having a laser receiver has information extractor for extracting said position information from a received laser signal (see col. 4:50-57) and judgment unit for judging shot effect using the extracted position information extracted by said laser receiver (see col. 4:58-5:10) and wherein said laser receiver resolves and stores event using position information extracted by said laser receiver (see col. 4:50-57)

The Varshneya reference fails to provide a teaching of a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event.

However, the Draper et al reference provides a teaching of having a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event (see col. 3:15-30 and col. 5:60-68). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of having a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event, as taught by the Draper reference, in order to better simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

**Claim 2:** The Varshneya reference provides a teaching for target practice wherein said laser transmitter transmit said modulated laser signal in response to a signal from a shooting apparatus of a weapon (col. 2:57-59).

**Claim 3:** The Varshneya reference provides teaching position information of said information of said laser transmitter is the position information is the position information output from a shooting side finder of said laser transmitter (see 4:43-47 (GPS (x,y,z) data).

**Claim 10:** The Varshneya reference provides a teaching of a judgment unit to judge shot effect using position information extracted from a received laser signal (see col. 4:58-5:10).

The Varshneya reference fails to provide a teaching of a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event. However, the Draper et al reference provides a teaching of having a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event (see col. 3:15-30 and col. 5:60-68 ). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of a teaching of having a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event, as taught by the Draper reference, in order to better simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

**Claim 11:** The Varshneya reference provides a teaching of a judgment unit to judge shot effect using position information extracted from a received laser signal (see col. 4:58-5:10). While the Varshneya provides a teaching of having the location information of both the shooter and target, the Varshneya reference does not explicitly mention that a distance information is obtained. The Varshneya reference also fails to provide a teaching of a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event. However, the Draper et al reference provides a teaching of using distance information (col. 6:50-68), having a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event (see col. 3:15-30 and col. 5:60-68 ). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of a

teaching of having a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event, as taught by the Draper reference, in order to better simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

**Claim 12:** The Varshneya reference provides a teaching of a munition type parameter recorder for recording munitions type parameter for each shot munitions type (col. 4:45-50) and a judgment unit for judging shot effect by using position information extracted from signal received by a receiver, mention type parameter in accordance with a shot munitions type information extracted from said signal and wherein said apparatus resolves and stores events using said position information, said munitions type parameter(see col. 4:58-5:10).

The Varshneya reference fails to provides a teaching of a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event. However, the Draper et al reference provides a teaching of having a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event (see col. 3:15-30 and col. 5:60-68 ). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of a teaching of having a memory to store geographical features information, using geographical features information stored in memory to judge shot effect and using said geographical stored in said memory to resolves and stores event, as taught by the Draper reference, in order to better simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

5. **Claim 4, 35-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Varshneya et al US 6,386,879 in view of Draper US 6,254,394 and further in view of Gerber et al US 5,788,500.**

**Claim 4:** While the Varshneya reference provides a teaching wherein said position information is the most recent position information position and time information correspond to said most recent position information (see GPS col. 2:62-65 GPS information ). The examiner is not certain if such information is continuously recorded.

However, the Gerber reference provides a teaching where the position and time information are continuously recorded (see col. 17:1-5). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of where the position and time information are continuously recorded, as taught by the Gerber reference, in order be able the provide the trainee and trainer the capability to analyze participant's action (see col. 17:35-50).

**Claim 35** The Varshneya reference provides a teaching of a laser transmitter is a shooting side apparatus receiving a shot trigger signal from a shooting apparatus of a weapon (see col. 4:30-34 "Trigger Pull") and transmitting laser signal in shot direction (see col. 4:15-30) and said shooting side apparatus is provided with a shooting side position finder for generating said position information (see col. 4:45 "GPS (x,y,z) data"); is designed to transmit ID number of said shooting side apparatus, shot weapon type information, shot munition type, but also position information of said shooting said apparatus output from said shooting side position finder in said laser signal in response to receipt of shot trigger signal from the shooting apparatus of the weapon (see col. 4:40-55 "shooter ID", "Weapon type", "Ammo type", "GPS x,y,z data").

The Varshenya reference fails to provide a teaching of a shooting side recoding apparatus for continuously. However, the Gerber reference provides a teaching where the position and time information are continuously recorded (see col. 17:1-5). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of where the position and time

Art Unit: 3714

information are continuously recorded, as taught by the Gerber reference, in order to be able to provide the trainee and trainer the capability to analyze participant's action (see col. 17:35-50).

The Draper reference does not provide a teaching of having a memory to store geographical features. However, the Draper et al reference provides a teaching of having a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event (see col. 3:15-30 and col. 5:60-68). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of having a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event, as taught by the Draper reference, in order to better simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

**Claim 36:** The Varshneya reference provides a teaching of a having a shooting side position finder that also generate information of a time (see col. 4:45 "Trigger Pulled Time") data of said shooting side position generated position information (see col. 4:45 "GPS (x,y,z) data"); said transmitter transmit not only position information of said shooting side apparatus but also time information output from said position side position finder included in said laser signal in response to receipt of a shot trigger singal from the shooting apparatus of the weapon (see col. 4:30-34 "Trigger Pull").

The Varshneya reference does not provide a teaching of continuously records the time information output from said shooting position finder. However, the Gerber reference provides a teaching where continuously recording the time information output from said shooting position finder. (see col. 17:1-5). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of continuously recording the time information output from said shooting position finder., as taught by the Gerber reference, in order to be able to provide the trainee and trainer the capability to analyze participant's action (see col. 17:35-50).

The Draper reference does not provide a teaching of having a memory to store geographical features. However, the Draper et al reference provides a teaching of having a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event (see col. 3:15-30 and col. 5:60-68). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of having a memory to store geographical features information and using said geographical stored in said memory to resolves and stores event, as taught by the Draper reference, in order to better simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

6. **Claim 37-41 rejected under 35 U.S.C. 103(a) as being unpatentable over Varshneya et al US 6,386,879 in view of Draper US 6,254,394, in view of Gerber et al US 5,788,500 and further in view of Erhard US 3,609,883.**

**Claim 37:** The Varshneya reference provide a teaching of a target side apparatus for receiving laser signal from said laser transmitter and judging shot effect (col 4:5-10); the target side apparatus is provided with target position finder for generating position information of said target side apparatus (see col. 4:60-65 DGPS); a munitions type parameter recorder to for recording munitions type parameter necessary for calculation of hit first range for each shot mention type (see col:4:63-69 and col.5:3-6 weapon-target data) and uses position information of said target side apparatus obtained from said target side position finder when receiving a laser signal transmitted by said shooting side apparatus, shot weapon type information included in the laser signal transmitted by said shooting side apparatus obtained from said parameter recorder (see col. 4:45-50) and munitions type parameter recorded for each shot munition type information (see col. 5:1-10), the plurality of ranges of tracking of a target by shot munitions set for the different states of damage and effective time of the shot munitions to calculate and record the risk range by coordinate of a 3D reference system and compares the

Art Unit: 3714

Recorded hit risk range and position of said target side apparatus obtained from said target side position finder so as to judge the shot effect (see col. 4:35-45 and col. 5:20-40).

The Varshneya reference does not provide a teaching of continuously records the time information output from said shooting position finder. However, the Gerber reference provides a teaching where continuously recording the time information output from said shooting position finder. (see col. 17:1-5). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of continuously recording the time information output from said shooting position finder., as taught by the Gerber reference, in order be able the provide the trainee and trainer the capability to analyze participant's action (see col. 17:35-50).

While the Varshneya reference provides a teaching of recording the weapon data, it does not explicitly mention that the velocity of a shot munitions recorded for each shot type information are used. However, the Erhard reference provides a teaching of using velocity of a shot munitions recorded for each shot type information (see col. 5:20-40). Therefore, it would have been obvious to include the feature of using velocity of shot munitions recorded for each shot type information, as taught by Erhard, in order to provide a realistic simulation of the flight time of the projectile (see col. 2:25-35).

**Claim 38:** The Varshneya reference provides a teaching of target side position also generates time information of a time generation of the position information (col. 4:50-58); the target side recording apparatus also records said time information output from said target side position finder said hit range is calculated and recorded for each pre determined elapsed time from a shot and said shot effect is judged for every predetermined elapsed time from a shot (col 4:60-5:10).

**Claim 39:** The Varshneya reference provides a teaching of calculates and records shots heading based on position information of said target side apparatus obtained from said target side position finder for each elapsed of a predetermined time from receiving a laser Signal transmitted from said shooting side apparatus (col. 4:59-68 “AZ” “EL”) and position information

of said shooting side apparatus obtained from laser signal transmitted by said shooting side apparatus (col. 4:40-50 DPGS).

The Varshneya reference does provide a teaching of a terrain recorder for recording coordinate range of the 3D reference system of terrain-based safe regions and compares the coordinates ranges of the terrain based safe regions recorded by said terrain recorder for each heading at which said target side apparatus is shot and the position of said target side apparatus obtained from said target side position finder to judge the shot effect. However, the Draper reference provides a teaching of a terrain recorder for recording coordinate range of the 3D reference system of terrain-based safe regions and compares the coordinates ranges of the terrain based safe regions recorded by said terrain recorder for each heading at which said target side apparatus is shot and the position of said target side apparatus obtained from said target side position finder to judge the shot effect (see col. 3:15-30 “foxhole” and col. 5:60-68). Therefore it would have been obvious to one of ordinary skilled in the art to include the feature of having a terrain recorder for recording coordinate range of the 3D reference system of terrain-based safe regions, as taught by Draper, in order to simulate the simulated battlefield by taking into effect of different weapon and different terrain effect (see Abstract).

**Claim 40:** The Varshneya reference provides a teaching of a target side apparatus for receiving the laser signal from a laser transmitter and judging the shot effect (see col. 4:5-15), said target side apparatus is provided with target side position finder for generating position information of said target side apparatus (see col. 3:50-60 DPGS), a Munition type parameter recorder for recording mention parameter necessary for calculation of hit risk range for each shot munitions type (see col. 5:1-10 “weapon data”) the plurality of ranges of tracking target by shot munitions type information (col. 5:1-10 “casualty report”) the plurality of ranges of tracking by a shot munition set for different damage ((col. 5:1-10 “casualty report”)) and effective time of the shot mention to calculate and record the hit risk range by a coordinate range of 3 D reference system (see col. 5:25-35 and col. 4:55-68) and compares the recorded hit risk range and

position of said target side apparatus obtained from said target side position finder to judge the shot effect (col. 5:1-10 “casualty report” and range).

The Varshneya reference does not provide a teaching of continuously records the time information and position output from said shooting position finder. However, the Gerber reference provides a teaching where continuously recording the time information output from said shooting position finder (see col. 17:1-5). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of continuously recording the time information output from said shooting position finder., as taught by the Gerber reference, in order be able the provide the trainee and trainer the capability to analyze participant’s action (see col. 17:35-50).

**Claim 41:** The Varshneya reference provides a teaching of target position finder also generates time information of a time generation of the position information (col. 4:50-58); said target side recording apparatus also records said time information output from said target side position finder, said hit risk range is calculated and recorded for each predetermined elapsed time from a shot and said shot effect is judged for every predetermined elapsed time from a shot (see col:4:63-69 and col.5:3-6).

7. **Claim 42 rejected under 35 U.S.C. 103(a) as being unpatentable over Varshneya et al US 6,386,879 in view of Draper US 6,254,394, in view of Gerber et al US 5,788,500, in view of Erhard US 3,609,883 and further in view of Berger 6,813,593.**

**Claim 42:** While the Varshneya reference provides a teaching of smoke generators to realistically simulate the effect of a shot (col. 3:45-50). The Varshneya reference do not provides a teaching where the amount of the smoke is varied with respect to the accuracy of the shot. However, the Berger reference provides a teaching where the amount of the smoke is varied with respect to the accuracy of the shot (see col. 2:53-57). Therefore, it would have been obvious to one of ordinary skilled in the art to include the feature of having the amount of the

Art Unit: 3714

smoke is varied with respect to the accuracy of the shot in order to provide a more realistic simulation.

***Response to Arguments***

Applicant's arguments with respect to claims 1-4, 10-13, 35-42 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pollack US 6106297 –position and time recording for future review-.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT J. UTAMA whose telephone number is (571)272-1676. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezutto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. J. U./  
Examiner, Art Unit 3714

Art Unit: 3714

/Ronald Laneau/  
Supervisory Patent Examiner, Art Unit 3714  
04/24/08